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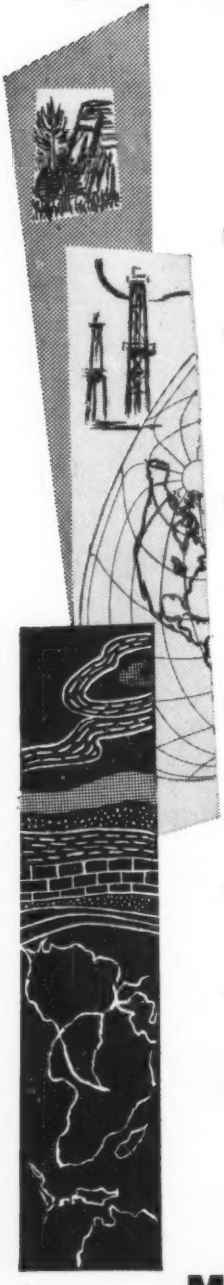

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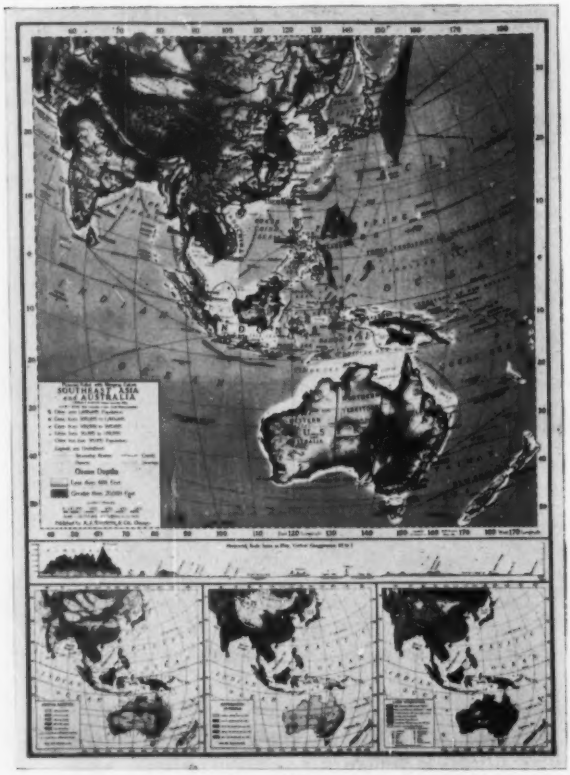

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NOTES ON THE GEOGRAPHY OF SOUTH WEST AFRICA*

HARM JAN DE BLIJ
Northwestern University

INTRODUCTION

The concept of constant change in the political pattern of the world is nowhere more clearly exemplified than it is in Africa. Since the end of the Second World War, several independent States have emerged and other territories are due to acquire that status in the near future.

None of the three former German colonies in Africa have advanced appreciably toward independence.[1] At the end of the First World War, in terms of the Treaty of Versailles, the Union of South Africa was entrusted with the Mandate over South West Africa.[2] The administration of the territory was exercised on behalf of the League of Nations,[3] and South West Africa was to be treated as an integral part of the Union (Fig. 1). Subsequently to the dissolution of the League of Nations, the Union continued to govern the territory and granted considerable autonomy to the local government which had been established. South West Africa is also represented in the Union Parliament and the Senate, and integration is not far from complete.

Since 1950, repeated appeals have been made in the United Na-

* The maps of Elevation, Vegetation and Native Reserves have been based upon J. H. Wellington's *Southern Africa*, and are reproduced with kind permission of the author and publishers Cambridge University Press. Each has been slightly modified. The isohyets on the map of Climates and Precipitation have also been derived from this source, and the climatic divisions are after S. P. Jackson. The map of Population has been prepared from various sources, including the former.

[1] The French Cameroons and Tanganyika are other former German territories in Africa.

[2] H. M. J. van Rensburg, *Die Internasionale Status van Suidwes—Afrika*. Luctor et Emergo, Leiden, 1953.

[3] *Official Yearbook of the Union and of Basutoland, Bechuanaland Protectorate and Swaziland, 1952/53*. The Government Printer, Pretoria, 1953-4, p. 1146.

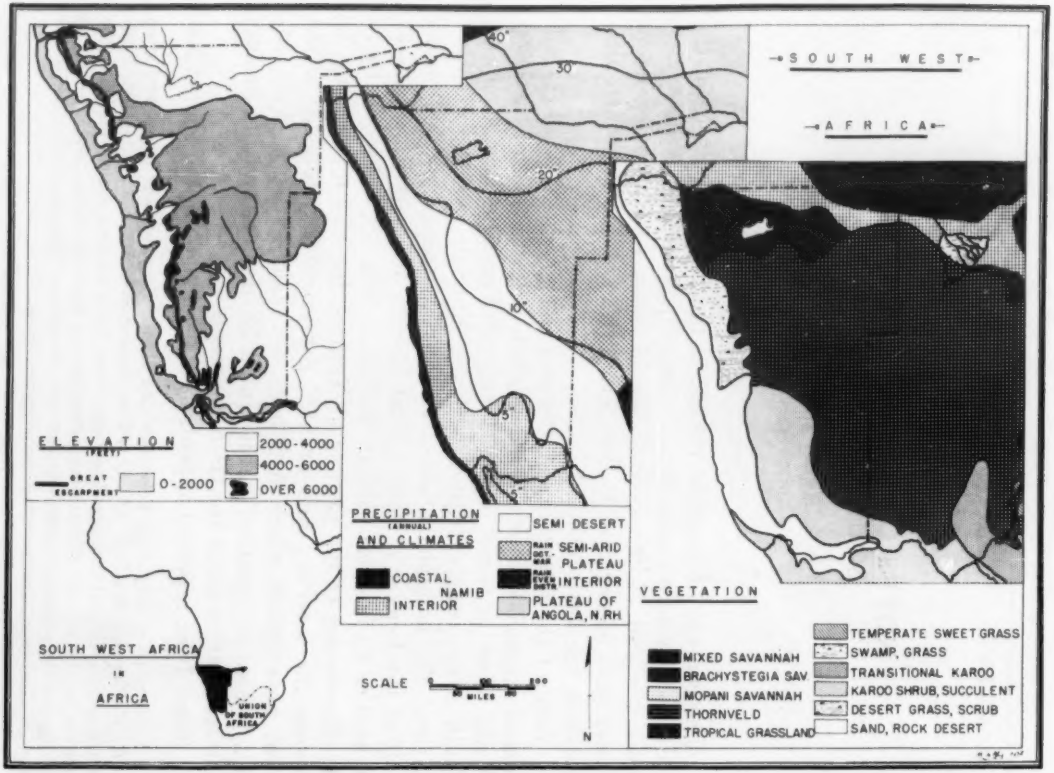
SOUTH WEST
AFRICA
40°
30°
20°
10°
5°
5°
ELEVATION
(FEET)
GREAT ESCARPMENT
2000-4000
4000-6000
0-2000
OVER 6000
PRECIPITATION
(ANNUAL)
AND CLIMATES
SEMI DESERT
RAIN OCT.-MAR. SEMI-ARID PLATEAU
COASTAL NAMIB
RAIN EVEN DISTR. INTERIOR
INTERIOR
PLATEAU OF ANGOLA, N.RH
VEGETATION
MIXED SAVANNAH
BRACHYSTEGIA SAV
MOPANI SAVANNAH
THORNVELD
TROPICAL GRASSLAND
TEMPERATE SWEET GRASS
SWAMP, GRASS
TRANSITIONAL KAROO
KAROO SHRUB, SUCCULENT
DESERT GRASS, SCRUB
SAND, ROCK DESERT
SOUTH WEST AFRICA
IN
AFRICA
UNION OF SOUTH AFRICA
SCALE
0
100
200
300
MILES
N

FIG. 1

tions, requesting that the Union relinquish its hold upon South West Africa. This would enable the United Nations to decide upon the political future of the territory, taking into account the desires of the inhabitants, both white and non-white.

While the political aspects of the question still defy solution, they do not affect the course of this investigation. In reading thru some of the current texts on Africa, the writer was struck by the lack of information they include on South West Africa.[4] In those texts which do include a discussion of the territory, so much space is often allotted to the political situation that regional aspects do not receive due consideration.

While the scope of this paper is too limited to allow for a consideration of the interrelations of the physical, human, and political factors, it will serve the purpose of stressing certain of the more important geographical aspects of South West Africa. There can be no doubt that the political facets will receive much attention in the future, but for an understanding of these developments, an adequate background is a prerequisite.

PHYSICAL FEATURES

Including the Caprivi proruption, which the Germans claimed in order to acquire a trade route to the Zambezi, Rhodesia and, indirectly, the Indian Ocean,[5] the total area of South West Africa is 317,725 square miles. This corresponds to the area of Texas and Louisiana. The South African Plateau, of which it forms a part, is not as high in the west as it is in Natal and Basutoland, but near the Great Escarpment elevations of over 6,000 feet are found (Fig 1). The western edge of the plateau, formed by the Great Escarpment, is not as well defined as it is along the eastern margin, but may be traced in the north and south of the territory. From its high point along the Great Escarpment, the plateau surface gradually slopes eastward and downward into the Kalahari Basin, where Tertiary Kalahari sands cover the bedrock geology. The latter,

[4] Dudley Stamp's *Africa*, Wiley, New York, 1953, is an example, while Anne Welsh's *Africa South of the Sahara*, Cambridge University Press, 1951, is an exception. J. H. Wellington's *Southern Africa*, Cambridge University Press, 1955, concentrates much on the Union, and on maps in the text South West Africa is not often represented. The exhaustive nature of this work indicates that the omissions result from a lack of adequate available information.

[5] R. J. Harrison Church, "African Boundaries," Ch. XXXI, *The Changing World*, ed. W. G. East and A. E. Moodie, World Book Company, New York, 1956, p. 740.

where exposed, is dominated by Precambrian crystallines and metamorphosed sedimentaries, but there are remnants of considerable size of the Stormberg volcanics which constituted the Gondwana surface.

On the coastal side of the Great Escarpment lies the Namib Desert, practically rainless thruout the year. Here surface air moving from west to east is cooled by the cold Benguela Current,[6] resulting in a fog which may be blown inshore, causing some cooling there, but no precipitation. The desert surface slopes upward toward the escarpment and is constituted of recent coastal sediments in the south, while bedrock is more prevalent in the north.

The entire area of South West Africa is marked by excessive aridity, and the climatic divisions are largely based on total annual precipitation figures.[7] The basis for differentiation between the Coastal Namib type and the Interior Namib type is the limited cooling effect of the Benguela Current; both deserts are very dry, altho the isohyets show a slight increase toward the east. Corresponding approximately to the area between the five and ten inch isohyets is an area of semidesert (Fig. 1). The remainder of South West Africa, the area to the northeast, lies in a zone of rainfall increasing from ten inches in the southwest to just over 20 inches in the extreme northeast. Here rainfall takes place primarily from October to March, the other months are marked by dryness. In this northeastern area the only perennial streams in the entire territory occur. Rainfall reliability is low and in the north the high temperatures and occasional heavy rains have proved conducive to the development of malaria.

The vegetation of South West Africa is largely an expression of the aridity of the climate. A zone corresponding approximately to the cool Namib Desert is wholly without vegetation, with the exception of the river courses which have a rich flora. Toward the interior a sparse growth of grass is mixed with various kinds of shrub (Fig. 1), but beyond the ten inch isohyet and covering the bulk of the eastern interior is thornveld, where the grasses are nu-

[6] H. J. de Blij, "The Sea Fishing Industry of South Africa," *The Journal of Geography*, Vol. LVII (March, 1958), Figure 1.

[7] S. P. Jackson, "Climates of Southern Africa," *South African Geographical Journal*, Vol. XXXIII (September, 1951). This article gives a comprehensive account of the climatic divisions of South West Africa. Precipitation figures have been derived from J. H. Wellington's *Southern Africa*, Vol. I, Map 3 in separate folder.

tritious[8] and the river courses marked by very dense vegetation. Thorn trees at rather large intervals cover the countryside. To the north, where the rainfall average exceeds 20 inches, the bush becomes much denser, the grasses taller and areas of Mopani forest occur.

The resources of South West Africa are not as negligible as the conditions might suggest. While aridity prevents agriculture on a commercial scale except where irrigation may be practiced, the raising of stock took place even prior to the coming of the white. Even today, the vegetation proves adequate to sustain a pastoral industry of appreciable size. The gravels along the coast have proved to be diamondiferous for 300 miles directly north of the mouth of the Orange River, and lead ores, zinc, lithium, manganese, salts, and tungsten are amongst the mineral exports. The coastal waters have supported a rapidly expanding fishing industry. In terms of actual and potential resources, South West Africa's importance on the continent is by no means negligible, despite its hostile physical characteristics.

Human Aspects

The total population of South West Africa, according to the 1951 census, was 415,000 persons, of whom just under 50,000 were white. Beside 17,000 persons of mixed blood, Malayas, and Asiatics, the total of 349,000 Africans is an estimate. The capital and administrative center is Windhoek, one of the few cities in Africa which have a predominantly white population: 18,000 whites and 14,000 Africans (Fig. 2). Keetmanshoop, Luderitz, and Swakopmund in that order rank next to Windhoek as the main urban centers of the territory, but their combined populations are less than the total for Windhoek alone. It should be noted that Walvis Bay is an integral part of the Union and is not a South West African port. Increasing interest in South West Africa by South Africans is reflected by the immigration figures: from a net increase of 42 in 1947 there has been a steady rise in immigration, the total in 1952 being 569. Emigration decreased from 28 in 1950 to 12 in 1952.

Over 30 per cent of the white population lives in the towns,[9] and the rest is to be found on 4,600 white-owned farms and at the mines.

[8] South African Yearbook, 1952-53, *op cit.*, p. 1148.

[9] J. H. Wellington, *Southern Africa*, Vol. II, Cambridge University Press, 1955, p. 216.

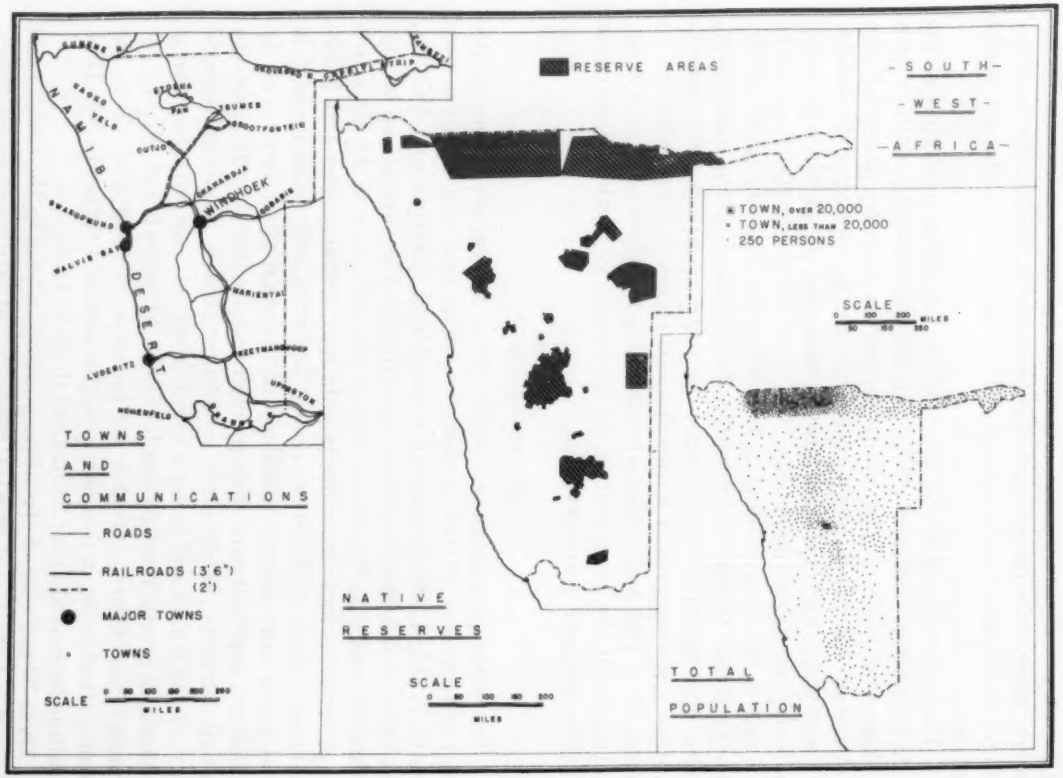
RESERVE AREAS
- S O U T H -
- W E S T -
- A F R I C A -
TOWN, OVER 20,000
TOWN, LESS THAN 20,000
250 PERSONS
SCALE
0 100 200 MILES
50 150 250
NAMIB
DESERT
WINDHOEK
SWAKOPMUND
WALVIS BAY
OKAHANDJA
OMARURU
OUTJO
GROOTFONTEIN
TSUMEB
GOBABIS
KARIBIB
OKAKARA
KAOKO VELD
MARIENTAL
KEETMANSHOOP
LUDERITZ
GIBEON
HOMEVALE
TOWNS
AND
COMMUNICATIONS
ROADS
RAILROADS (3'6")
(2')
MAJOR TOWNS
TOWNS
SCALE
0 50 100 150 200 250
MILES
NATIVE
RESERVES
SCALE
0 50 100 150 200
MILES
TOTAL
POPULATION

FIG. 2

The African population and the "Coloreds" occupy reserve areas (Fig. 2) but 15 per cent find work in the urban centers, on the farms, and in the mines. A map of total population (Fig. 2) shows that the greatest densities occur along the border with Angola, in the reserve known as Ovamboland.

Communications in South West Africa are improving steadily. There are now over 1,100 miles of railroad three feet six inches wide, and 350 miles of two feet gauge lines (Fig. 2). From Swakopmund, Walvis Bay and Luderitz extend the only roads which connect the interior with the coast. In the interior the towns are linked by over 28,000 miles of roads of inconsistent quality. The Railway Administration operates several road motor services along these routes which link the towns. With the closure of the port of Swakopmund, Walvis Bay has become the leading port serving South West Africa. It has a good natural harbor, with a wharf 1,500 feet long along which there is berthing space for three large vessels.[10] It has also become the focal point for the expanding fishing industry. At Luderitz is the second, less well-equipped harbor.

Economic Considerations

It has been indicated previously that the majority of the people in South West Africa engage in farming, and that cattle and sheep raising is the main occupation. A list of the seven leading exports will serve to illustrate the distribution of returns from the various commercial activities (Table 1).[11]

TABLE 1

Exports by Value, 1951

Export Product	Value in Pound Sterling
Diamonds	9,671,800
Other Ores (see above)	8,614,235
Hides and Skins	6,067,032
Wool	1,541,388
Livestock	1,188,120
Butter	1,187,104
Other Agricultural, Pastoral Products	1,028,462

While, thus, most of the people are engaged in pastoral activities, the largest returns are from mining of various kinds. Imports

[10] South African Yearbook, *op cit.*, p. 1193.

[11] *Ibid.*, p. 1191.

are mainly metal and manufacturing products, and textiles and foodstuffs. The balance of trade is favorable. Inspection of the annual production figures over the last decade shows increases in output of considerable proportions, both of mining and of pastoralism. A fuller utilization of the water supplies known to exist below the sandy surface of ephemeral and intermittent water courses could support an increased agricultural output. Much prospecting remains to be done in South West Africa, and mineral production may be further increased by new finds.

CONCLUSIONS

This entirely factual paper has no pretenses to completeness. Neither does it employ geographic techniques of analysis and interpretation. It does, however, fill a gap which those who read the footnoted works will find to be very real. In postwar years, if the economic figures are any indication, South West Africa has prospered under the guidance of the Union. Its mineral wealth makes the territory a coveted prize, and it is no matter for surprise that the Union has sought to establish strong ties with it. Assertions have been made that the territory could attain a status of independence, but it should be remembered that the white population, which controls the organization of the country, has appealed to the United Nations to permit incorporation in the Union. The proposal was rejected by that Organization in 1946,[12] notwithstanding the fact that 208,850 Africans also expressed their views in favor of transfer.[13] As Lord Hailey points out, it is doubtful whether these mainly illiterate Africans could grasp the significance of such a transfer, and thus their opinion did not carry much weight. The main body of opposition came from the Herero tribe, which has suffered under unspeakable German atrocities[14] at the turn of the century and which has not been elevated to its former position of power by the Union Government.

It is hoped that this paper will provide a small part of the background which is necessary to comprehend the problems of the political geography of South West Africa.

[12] L. D. Stamp, *Africa*, Wiley, New York, 1953, p. 488.

[13] Lord Hailey, *An African Survey*, Revised Edition, 1956. Oxford University Press, 1957, p. 173.

[14] *Report on the Natives of South-West Africa and Their Treatment by Germany*. Prepared in the Administrator's Office, Windhoek, South-West Africa, January, 1918, and published by His Majesty's Stationery Office.

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CALIFORNIA'S AGRICULTURE—SOME REALITIES*

Chester F. Cole
Fresno State College

California is often credited with being a state of surprising revelations to the tourist and to the recent immigrant from eastern states. The facts are perhaps even more impressive than the tales told by casual observers. Industrial growth in recent years has been phenomenal and well documented. Agricultural production is spectacularly important and is accomplished by highly scientific and mechanized methods. Marked changes have taken place in the last three decades in the amount of land cultivated and irrigated, in the relative rank among items of agricultural production, and in

* Statistiual data were taken from K. R. Farrell, *Geographic Changes in California Agriculture*, University of California, Agricultural Extension Service, September 1957; C. O. McCorkle, "Statistical Picture of California's Agriculture," *Circular 459*, California Agricultural Experiment Station, Extension Service, April 1957; D. M. Rutherford, *Some Facts about California Agriculture*, University of California, Agricultural Extension Service, October 1957; *U.S. Census of Agriculture*, 1954.

site changes in production. Perhaps nowhere in the United States is such a large area of land managed with such skill and with such astonishing results as is true of the irrigated land of California.

USE, SIZE, VALUE AND RANK

California has a land area of 100,314,000 acres of which 10.2 per cent is cropland, 31 per cent is pastureland and nonforested rangeland, 44.7 per cent is forest land (excluding 14 million acres of parks and other special uses) and 14.1 per cent is in miscellaneous uses (marshes, sand dunes, bare rock) and special use areas (roads, rights of way, farmsteads, urban areas, parks, wild

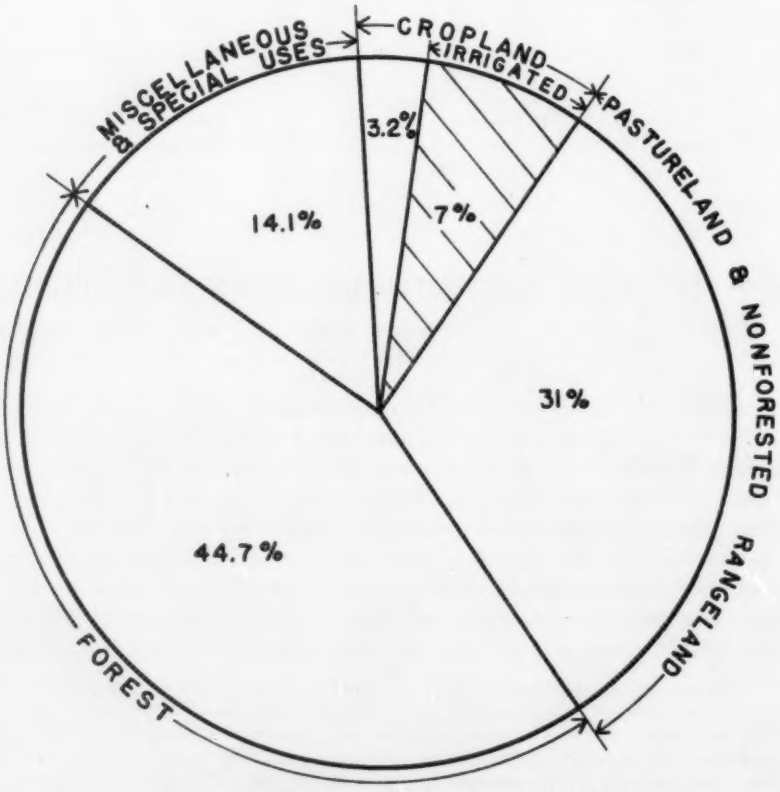

FIG. 1. California Land-Use Total Acreage: 100,314,000.

life refuges and airports) (Fig. 1). The concern here is with the 10,219,000 acres of cropland of which 69 per cent is irrigated.

Farms on the average are large—307 acres compared to the national average of 242 acres; yet, 27.7 per cent of California's farms are under 10 acres compared to 10.1 per cent for the nation. California's farmland is valuable—$224.99 per acre compared to a national average of $84.37—due to the productiveness of the land managed by competent, trained farmers and because of the high percentage of cropland which is irrigated. The state leads the nation in gross farm income ($2.8 billion in 1956) followed by Iowa.

California's agriculture is specialized agriculture; relatively few farms raise a large variety of crops. Various areas of the state, due to soil, climatic, water and marketing conditions, specialize in different commodities. There are significant areas of specialization within counties, often within a few miles. For example, eastern Fresno County, located in the center of the San Joaquin Basin, is noted for figs, grapes and deciduous tree fruits; the western part of the county is noted for cotton, barley, cantaloupes and seed crops—not a grapevine is to be found in this area because of the different quality of soils, some areas of poor drainage, or quality of irrigation water.

The highly mechanized, mainly irrigated, 123,000 farms produce commercially some 200 products with the aid of approximately 490,000 hired laborers. Some of the variety of production and national importance may be grasped from the following table.

Commodity	1955 value $1,000	Per cent of U.S.	Rank among all states
Field Crops			
All hay	160,038	7.0	1
Barley	66,681	18.4	1
Cotton lint	222,515	9.2	4
Cottonseed	23,506	8.7	4
Potatoes	58,129	16.5	3
Rice	50,337	20.1	4
Sugar beets	36,679	27.5	1
Citrus Fruits			
All oranges including tangerines	82,368	33.5	2
Lemons	38,080	100.0	1
Tree Nuts			
Almonds	32,976	100.0	1
Walnuts	39,960	93.8	1

(Continued on page 344)

Fruits, Noncitrus			
Figs	6,129	100.0	1
Grapes	111,793	84.5	1
Olives	8,307	100.0	1
Peaches	67,791	61.9	1
Plums	15,222	97.3	1
Prunes	38,745	86.1	1
Vegetables, Fresh			
Artichokes	3,026	100.0	1
Cantaloupes	20,550	37.4	1
Lettuce	86,317	62.1	1
Tomatoes	40,567	28.8	2
Strawberries	25,200	32.4	1
Livestock and Livestock Products			
	Gross Income		
Cattle and calves	305,286	5.8	5
Eggs	152,900	8.0	1
Milk	319,620	6.8	1
Sheep and lambs	26,099	8.2	1
Turkeys	54,967	16.7	1

It Costs Money

The tremendous agricultural production takes place essentially in a dry climate in which moisture content of the soils is scientifically controlled; on excellent, but varying, alluvial soils which need and get skilled treatment, and at great cost, justified by quality and quantity of production. California farmers annually purchase more than $70 million worth of commercial fertilizer; they have an average investment of $14,000 per farm worker, and in some cases more than $50,000 (over three times the investment per industrial worker). Each year $440 million are spent to hire agricultural labor, over $50 million for control of pests and diseases affecting plants and about $450 million to ship farm products to market. In 1955 total production expenses of farmers in California amounted to $1,766,400,000 of which $1,372,500,000 were for current farm operating expenses (1955 total agricultural income $2.5 billion).

Changes—Population and Land Use

Between 1930 and 1954 land in farms increased from 30.4 million acres to 37.8 million and irrigated cropland from 4.7 million acres (56.6 per cent of cropland) to slightly more than 7 million (69 per cent of cropland). These increases occurred while the state's population increased from 5.7 million to 12.5 million (14 million in 1957) and while some of the state's most fertile land was being taken out of production and being covered with asphalt and concrete of freeways and subdivisions.

In 1957 California had a population increase of more than one person per minute—about 1560 new residents per day (960 from in-migration and 600 from natural increase). It must be said parenthetically that the recession of 1958 apparently, but not certainly, has begun to slow the in-migration. These people require living space, for the most part in urban and suburban areas, and roads upon which to drive their cars and to transport their goods. Since 1942 over 820,000 acres have been converted to nonagricultural land uses; one-fourth of this acreage has been in Los Angeles County alone amounting to 19 per cent of the former cropland of that county. Nearly all of this land has gone into subdivisions, industrial uses and freeways. In 1956 Orange County lost 6,000 acres from citrus production to residential, industrial, and transport uses. Long ago the population of California began to agglomerate on good agricultural land and the process continues.

Additional land continually is being brought under cultivation to compensate for losses to other types of land use and to produce commodities for an expanding state and national market. For example, the irrigated acreage of the state increased 10 per cent between 1949 and 1954, mainly in the San Joaquin Basin. As population continues to increase and urban and suburban developments take more land, agriculture will locate on new sites, less desirable, but productive, because the expanding market and increased prices will make production from such land profitable.

Water

Water for urban, industrial and agricultural uses is always prominent in any discussion of California's growth. The local press, and to a lesser extent the national press, often give the impression that there is a great water shortage in California. This is misleading; there is plenty of water within the state but it is poorly distributed. The total annual runoff of California's streams amounts to 71 million acre feet, and the present total annual requirement is about 25 million acre feet. Ultimately requirements will be between 50 and 60 million acre feet. At least three to four million acres of land are available for irrigation, but this land is topographically rough; consists of saline, saline-alkali or nonsaline-alkali soils; is poorly drained, or is afflicted with any combination of these factors. Such land needs leveling and/or leaching, costly soil amendments, drainage and irrigation. Because of costs, much

of this land probably will come under irrigation rather slowly. Lack of land may set the limits of total irrigated acreage rather than the lack of water, except that it must be remembered that equalizing the poor natural distribution of water may be a very costly task which could impose limits on irrigated acreage expansion.

THE FUTURE

There is room for more people in California. More people can be well supported in the state, and by 1975 the population probably will exceed 20 million. Agriculture will continue to be impressively prosperous, predominantly irrigated, and varied almost beyond belief. Poorer land will be brought under irrigation slowly as the population increases and as urban sprawl consumes more of the existing cropland.

THE CONTINENTAL SHELVES

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INTRODUCTION

Continental shelves are submerged surfaces that fringe most of the continents and cover about 10,464,000 square miles, or 7.6 per cent of the ocean surface.[1] The area of the world's continental shelves is 12 per cent greater than that of the Soviet Union, the world's largest nation. Furthermore, the shelves are rich in natural resources, the utilization of which creates many internal and international issues. Since many geography textbooks and teachers have neglected this topic, the purpose of this paper is to provide the essential facts and ideas about the shelves which can be used as a teaching reference. The paper is divided into three general topics: 1) physical characteristics, 2) economic importance, and 3) political problems.

PHYSICAL CHARATERISTICS

Physically, the shelves have a very gentle surface that extends seaward from the low tide line to where there is a marked steepen-

[1] M. W. Mouton, *The Continental Shelf*, Martinus Mijhoff, The Hague, 1952, p. 7.

ing of gradient. This outer edge is the beginning of the continental slope which dips toward the deep ocean floor. The gradient of the shelves averages 10.7 feet per mile, compared with 400 feet per mile for the landward parts of the continental slopes.[2]

The shelves at low tide mark are shallow. Their average depth near the outer edge is 72 fathoms, but depths may range from 20 to 400 fathoms.[3] The width of the shelves varies from almost zero to over 800 miles with an average of 42 miles.[4] Over 60 per cent of the shelves occurs in the Artic Ocean, the Gulf and the Caribbean waters, and off the coasts of Northwest Europe, Far East and Argentina. Shelves in other areas are usually small.[5]

The surface of the shelves is composed of bedrock, gravel, sand, silt, clay, glacial tills, calcareous or siliceous shells, and other organic deposits. Topographic diversity is introduced by submarine islands, volcanoes, salt domes, banks, shoals, reefs, as well as structural basins, submarine valleys, and glacial troughs. The maximum relief for these topographical features is not great. According to F. P. Shepard, over 60 per cent of the shelf profiles examined have a relief of 10 fathoms or less.[6]

Ecomonic Importance

Economically, the shelves are rich in petroleum resources. According to W. E. Platt, there is more oil under the various shelves than under all the dry lands of the world.[7] In this country, the congressional report of 1953 puts the potential oil resources at 74,241,000,000 barrels, with 40,506,000,000 barrels under the shelves

[2] F. P. Shepard, *Submarine Geology*, Harper & Brothers Co., New York, 1948, pp. 175-206.

[3] The outer edge is often considered to be at the 100 fathoms depth. *Ibid.*, pp. 105, 143-144.

S. W. Boggs, Delimination of Seaward Areas Under National Jurisdiction, *American Journal of International Law*, Vol. 45 (April, 1951), p. 245.

[4] M. W. Mouton, *op cit.*, p. 22.

As far as this nation is concerned, the widths of the shelves vary from near 200 miles off the Gulf or Atlantic coast to less than 40 miles off the Pacific coast.

[5] The size of the shelves off the Alaska coast is about 600,000 square miles, and that off our Atlantic, Pacific, and Gulf coasts is about 240,000 square miles, including 27,000 square miles within three miles to the low tide mark.

Committee on the Judiciary, House of Representatives, *1953 Submerged Lands Act*, The Government Printing Office, Washington D.C., 1953, p. 57.

[6] F. P. Shepard, *op cit.*, pp. 143-144.

[7] Wallace E. Platt, *Petroleum on Continental Shelf, American Geographical Society, Special No. 31*, American Geographical Society, New York, 1950, pp. 319-324.

and only 33,735,000,000 barrels under the dry lands, such as Texas, California, and Louisiana (Table 1).[8]

Natural gas is associated with the submerged oil resources. The shelves off the coasts of Texas, California, and Louisiana alone were reported by Congress in 1953 to have 68,500 billion cubic feet of natural gas (Table 3).[9]

The technical problems for developing the submerged oil and gas resources can be solved. As early as 1922, submarine drilling and other processes were in use for exploiting the oil and natural gas resources of the Lake Maracaibo area in Venezuela. In the Gulf of Mexico, over 165 wells were drilled before June 1, 1950.[10] Since then, more wells have been developed. Development of the submerged oil fields is expensive. However, with the increased demand for petroleum and increased prices for petroleum products, the cost factor becomes less significant, and technical improvements may eventually reduce the cost of submerged operation.

In view of the possibility of developing submerged oil and gas resources, Congress on July 30, 1951 passed the Mineral Leasing Act. Under this act, private concerns can lease the shelves from the government at an annual rental of $1.00 per acre plus 12.5 per cent of the value of products from the shelf oil.[11] Of the revenue received, 62.5 per cent goes to the federal government and 37.5 per cent to the local state concerned.

In addition to oil and gas, the shelves have other mineral deposits, such as salt and sulphur. Many plants and animals are associated with the shelves, the more important ones being sea weeds, pearl, sponge, coral, lobster, shrimp, clam, and other species. Moreover, the shelves provide the base for submarine cables, pipelines, and other installations, such as jetties and roadsteads.

Political Problems

Politically, the shelves, or parts of them, have been claimed by the coastal states as territorial seas or as contiguous zones. The territorial sea immediately off the coast, including the water and

[8] The proved oil resources under the shelves off the coasts of the United States, excluding those off Alaska, were estimated by Congress in 1953 at 492,000,000 barrels (Table 2).

[9] Compared with 196,980 billion cubic feet of natural gas resources under the dry lands of Texas, California, and Louisiana.

[10] M. W. Mouton, *op cit.*, pp. 52-58.

[11] *Ibid.*, pp. 52-56.

TABLE 1

POTENTIAL PETROLEUM RESOURCES OF THE U.S.*

Areas	Oil Resources (1,000,000 bbls.)
Dry lands	
Texas	18,204
California	4,529
Louisiana	3,005
Others	7,997
	33,735
Shelves (Alaska)	23,600
Shelves (Mainland)	
Texas	
Within 3 miles	400
Outside the 3-mile zone	9,000
California	
Within 3 miles	1,100
Outside the 3-mile zone	2,156
Louisiana	
Within 3 miles	250
Outside the 3-mile zone	4,000
	16,906
Total	74,241

* Sources of Data:
Senate of the United States, *1953 Submerged Lands Act*, (Washington D. C.: the Government Printing Office, 1953), Vol. 2, pp. 5–6;
Committee on the Judiciary, *op. cit.*, p. 115.

the air space above the shelf, is deemed to be a part of the territory of the coastal state concerned. The contiguous zone, including the water with or without the associated shelf or air space, is beyond the territorial sea. It has been claimed by a few coastal states as a

TABLE 2

PROVED SHELF OIL RESOURCES OF THE U.S.*

Shelves	Oil Resources (1,000,000 bbls.)
Texas	
Within 3 miles	15,000
Outside the 3-mile zone	—[a]
California	
Within 3 miles	156,345
Outside the 3-mile zone	—[a]
Louisiana	
Within 3 miles	107,000
Outside the 3-mile zone	214,000
Total	492,345

* Source of Data: Committee on the Judiciary, *op. cit.*, p. 115.
[a] No data.

TABLE 3

NATURAL GAS RESOURCES OF THE U.S.*

Areas	Resources (billion cubic feet)
Dry lands	196,980
Texas	107,000
California	9,500
Louisiana	30,000
Others	50,480
Shelves	68,500[a]
Texas	
Within 3 miles	2,000
Outside the 3-mile zone	43,000
California	
Within 3 miles	2,000
Outside the 3-mile zone	1,500
Louisiana	
Within 3 miles	1,250
Outside the 3-mile zone	18,750
Total	265,480

* Source of Data: Senate of the United States, *op. cit.*, p. 5.
[a] With 63,250 billion cubic feet outside the three-mile limit.

zone of control thus challenging the principle of the freedom of high seas.[12] This discussion is limited to the territorial sea only.

There are many problems associated with the territorial sea, of which the most important is its breadth.[13] As early as 1673, the Peace Conference at Cologne established a three-mile limit for the territorial sea.[14] This was based mainly on defense or the so-called cannon-shot rule. For instance, in 1559 the heaviest gun used on ships had a range of one mile. Even in 1859, a steel ship gun of 42 pounds and nine feet long had a range of only 1.5 miles.[15] Under this condition, a three-mile territorial sea was adequate for coastal defense.

However, the maximum cannon-shot range increased later to 5 miles in 1859 and to 27 miles in 1939.[16] In recent decades, the de-

[12] The freedom of high seas comprises freedom of navigation, freedom of fishing, freedom to lay submarine pipelines and cables, and freedom to fly over the high seas.

[13] Other problems are the base, median, and lateral lines associated with the islands, bays, gulfs, entuaries, drying rocks, or shoals, and artificial installments, in addition to the sector theory for the polar areas.

[14] M. W. Mouton, *op cit.*, p. 101.

[15] *Ibid.*, pp. 194-196.

[16] On September 28, 1936, Louisiana passed an act extending the territorial sea up to 27 miles from the coast. This claim was based on maximum cannon-shot range.

velopment of airplanes and guided missiles makes it impossible to measure the breadth of the territorial sea on the basis of defense, which is now continental or even global in nature.

Moreover, functions other than defense exercised by the coastal states, such as the development of fishery, mineral, and other resources, and the prevention of enfringement of the custom, fiscal, pollution, immigration, and other legal regulations, require width exceeding the three-mile band as measured from the coast. For instance, of the 16,906,000,000 barrels of potential shelf oil resources off the coasts of Texas, California and Louisiana, about 15,156,000,000 barrels are outside the three-mile limit (Table 1).[17] Many nations have therefore claimed a wider territorial sea.[18] To mention a few, Norway, Sweden, and Finland claim 4 miles. Spain, Italy, Greece, Yugoslavia, Syria and Lebanon claim 6 miles. The Soviet Union claims 12 miles. South Korea claims 75 miles. Argentina, Brazil, Mexico, Costa Rica, Guatemala, Honduras, Nicaragua, Panama, and the Philippines claim the whole shelves. El Salvador, Ecuador, Peru and Chile claim 200 miles where the shelves are less than 42 miles wide.

On the other hand, many nations who lead in international trade or ocean fisheries, such as Great Britain and Japan, or who have no interest in, or access to the ocean, such as Nationalist China and Bolivia, still follow the three-mile rule. These nations prefer the high seas to be free for all nations, since the extension of territorial seas may interfere with common interests.

The above contradictory and confused situation needs clarification. At the present moment, the International Law Commission of the United Nations suggests that the maximum breadth of the territorial sea should be limited to less than 12 miles.[19] If a shelf is over 12 miles wide, the coastal state may exercise the sovereign rights over the entire shelf for the purpose of exploring and exploiting its mineral resources. However, these rights do not affect

[17] Also, according to the report of the International Law Commission of the United Nations, an effective fishery conservation program should include an area up to 200 miles off the coast.

[18] Or the contiguous zone. In September, 1945, President Truman issued a proclamation which asserted federal jurisdiction over mineral resources beneath the shelves off the United States mainland, its territories and possessions. However, this control did not affect navigation on the high seas above the shelves, nor did it extend the limits of the territorial waters of the United States.

[19] The maximum breadth for the contiguous zone suggested by the International Law Commission is also 12 miles off the coast.

the legal status of the superjacent water as high sea or that of the air space above the water.[20] Whether or not these suggestions will be approved by all nations remains to be seen.

CONCLUSION

The physical patterns, the economic resources, and the political problems of the territorial seas associated with the shelves have been briefly discussed. These facts and ideas indicate that the international issue of the shelves is, to a large extent, related to their rich petroleum and fishery resources and to their distribution and varying widths. The geography of continental shelves need to be studied for a better understanding and judgment of the national shelf policy and the international fishing disputes that frequently occur. The materials covered by this paper serve to enrich courses, related to geography such as Geographical Factors of World Affairs, as taught in high schools or junior colleges. Additional materials, if needed for advanced studies, can be obtained from the articles and books cited previously or from the following references:

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[20] United Nations, *Final Report on the Regime of the High Seas, the Regime of the Territorial Sea and Related Problems*, U.N. New York, 1957, pp. 56-59. See Articles 67 and 68.

Have you read Professional Paper No. 18 "The Elementary Social Studies: Sense and Nonsense in Integration?" Why not give a copy to your principal. Professor John Morris, Department of Geography, University of Oklahoma, Norman has copies for sale (25 cents each).

OREGON'S HOOD RIVER VALLEY

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The Hood River Valley is one of the best known names in Pacific Northwest agriculture. Many farming districts in the region are larger and have greater volume and value of produce. Except for the Columbia Basin wheat districts, however, none is so specialized. About three-quarters of the farm income is derived from the sale of pears and apples. Over a half-century of national and international marketing of these fruits has gained the valley a wide reputation as a quality fruit producer.

The Hood River Valley is also well-known as one of the scenic attractions of the West. It is enclosed on three sides by forest covered slopes of the Cascades with majestic Mount Hood crowning the southward view (Fig. 1). The Columbia River flows along the northern boundary in a spectacular gorge thru which the main access route (U. S. Highway 30) passes. The view northward, however, discloses snow-capped Mount Adams as the crowning feature. The magnificent setting gives the valley year around beauty, but it is especially attractive during the blossoming period in late May.

Physical Character

The Hood River system rises on the slopes of Mount Hood and drains an area which is mostly of rugged topography (Fig. 2). There is a fall of 7,500 feet from source to mouth, a river distance of 39 miles. The "Valley," occupying the bottom of the basin, is about 20 miles long and four to eight miles wide. Local relief separates it into two distinct units known as the Lower and Upper Valleys.[1]

The Lower Valley, the larger unit, extends about six miles southward from the Columbia River to Middle Mountain, a transverse ridge about 2,000 feet in elevation. The land rises rather abruptly from the Columbia in a series of narrow terraces to an elevation of 500 feet and then rises gradually as an undulating surface to 1,200 feet at the base of Middle Mountain. A low ridge encloses a small bench of a few hundred acres on the north flank of Middle Mountain known locally as Middle Valley.

[1] See U.S.G.S. Quadrangles: Mount Hood, Rood River, and The Dalles.

FIG. 1. An aerial view of the Hood River Valley shows the Mount Hood back-drop of this colorful farming area. The Lower Valley is in the foreground. Middle Mountain in the center background hides the Upper Valley. (Oregon State Highway Photo.)

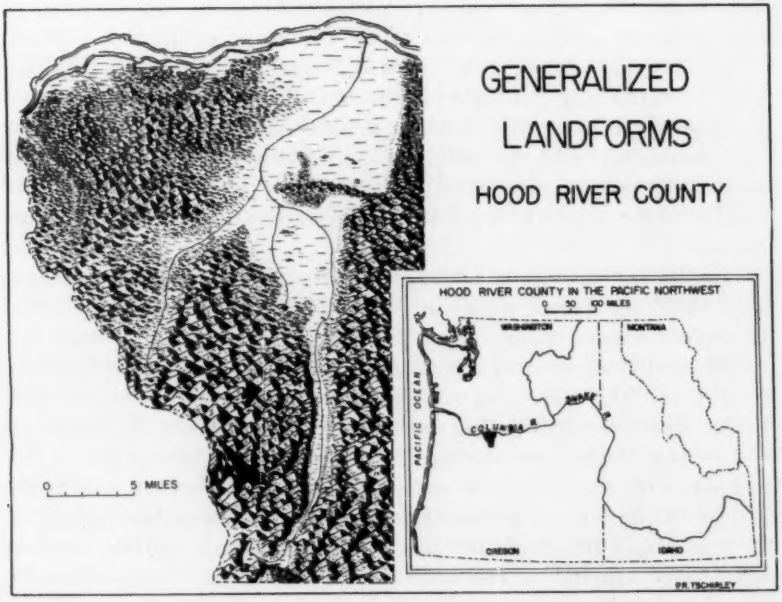

FIG. 2.

The Upper Valley, located south of Middle Mountain, is approximately seven miles long and four miles wide and rises southward in elevation from 1,500 to 3,000 feet. Here Hood River collects its tributaries; the East, Middle, and West Forks.

The surface of the entire valley was modified by glacial action. A till sheet of varying thickness was laid down over the floor and subsequently reworked by meltwaters and forerunners of the present rivers. The soil pattern is directly related to the nature of the local till and the action of water. Variations range from silt loam laid down in the quiet waters of a lake in the bottom lands of the Lower Valley, to loams derived from weathering of glacial outwash materials and gravelly sandy loams derived from stream deposits.

Hood River Valley lies in a transition zone between the marine influenced climate west of the Cascades and the dry continental climate of the intermontane region. Local topography and elevation, the Cascade Mountain barrier, and the Columbia Gorge play modifying roles. The latter is a near sea-level mountain gap thru

which an eastward movement of air normally flows. The build-up of high pressure cells to the east of the Cascades, or the development of low pressure troughs to the west occasionally reverse this pattern bringing dry, cold air in winter and hot, dry air in summer. Both seasonal extremes of temperatures in the Hood River Valley are associated with the influx of continental air masses from the east. Such periods are short; usually moderate temperatures and mild weather prevail, owing to the movement of maritime air from the west.

In the Lower Valley average temperatures are 33°F. in January, 44°F. in March, 67°F. in July, and 52°F. in September. The frost-free season ranges from 165 to 193 days depending upon elevation and local air drainage and the average degree-days May 1 to September 30 is 524.[2] The average annual precipitation is 32 inches in the western portion, decreasing eastward to about 28 inches. In the Upper Valley the average temperatures are three to five degrees lower; the frost-free season is somewhat shorter, averaging 140 to 145 days; and precipitation is eight to ten inches higher.[3]

The Hood River Valley has a definite winter rainfall climate with three-fourths of the total occurring in the five cool season months of November thru March and only four or five per cent in the three summer months of June thru August. Altho most winter precipitation is in the form of rain there are several light snowfalls each year, the number and depth increasing up the valley. Low summer precipitation requires that supplemental irrigation be practiced for late maturing and summer planted crops. This is favored by the physical character of the area. An ample supply of water in the streams during the warm season is furnished by melt from snow fields and glaciers on Mount Hood. The slope of the valley makes gravity flow of canals possible and minimizes the need for elaborate drainage facilities.

Eight irrigation districts and ditch companies are in operation. Together they supply water to about 19,000 acres. Small, low-head dams are used to divert water into open, unlined ditches which have been constructed along the high margins of the cropland. From these main cannals, laterals carry the water to the individual farms. Sprinkler systems are used on about 50 per cent of the land because of its rolling nature.

[2] Base 65°F. at City of Hood River.

[3] Data from U. S. Weather Bureau, Climatological Summary, Hood River Experiment Station (1925-1954).

Agriculture

Agriculture is the leading source of income in the Hood River Valley with the sale of farm products returning approximately $12 million annually. The Census of Agriculture in 1954 enumerated 1,002 farms with a total of 39,070 acres of which crops utilized 20,088 and pastures 9,049; forest and woodland covered the remainder. The bulk of the lands in farm ownership are Soils Conservation Service Classes II and IV; the former is found on the gently rolling valley floor and the latter forms a semi-circle around the Lower Valley on the slopes of Middle Mountain and the foothills to the west.

Farms are small; 39 acres is average, but 634 farms are under 30 acres and only 82 are over 100 acres. The majority of the farms have less than 20 acres of cropland. Yet about 70 per cent are classed as commercial; 200 are class I with product sales valued at $25,000 or more. The average value of land and buildings per acre is $532. Small size, comparatively high income, and high land-value are a reflection of the importance of fruit in the agricultural economy. This is also reflected in a low tenancy; 96.2 per cent of the farms are owner-operated. Most fruit farms are family operations, with hired labor used only for thinning and harvesting.

Typical of other fruit-growing areas of the West, the farmers of the Hood River Valley have long concentrated on high yields of quality fruit. This is necessary in order to compete in distant markets. Operators make use of the most modern equipment, the latest developments in insecticides and fertilizers, and the services of the County Agricultural Extension Agent and the Soil Conservation Service.

Fruit raising is the most profitable farm enterprise and the valley rates as one of the older orchard districts of the Pacific Northwest. Half of the total farms and three-fourths of the commercial farms are classed as fruit farms. Practically all suitable land is devoted to this use, the principal qualifying factors being suitable soils to provide root development, good air drainage to minimize the danger of late spring frosts, and irrigation to offset summer drought. The valley specializes in apples and pears, but some cherries, peaches, and strawberries are also grown. Many of the trees are over 40 years old—the life cycle for apples and winter pears is from 40 to 60 years, and about 40 years for Bartlett pears. The common practice of perpetuating orchards here is by removing

individual trees past their prime and replanting young trees. There is, however, some block planting.

Apples were the chief crop until a severe freeze in 1919. At that time more than 10,500 acres were in production. Plantings in recent years have leveled off at about 4,000 acres. The chief varieties are Newtowns and Delicious. The trend at present is toward the Red Delicious variety

The apple trees are spaced from 24 to 36 feet apart in the orchards. They are pruned to heights of ten to 12 feet to make them spread out and thus facilitate picking and thinning while keeping the trees healthy and growing vigorously. The average yield per acre in recent years has been 586 loose boxes. The major share of the crop is packed and sold fresh. About 1.2 million packed boxes are shipped annually and about 10,000 tons are used for cider and canning.

Pear acreage has increased steadily since 1919 at the expense of apples. Present plantings total 6,900 acres. Three varieties predominate: D'Anjou, 77 per cent; Bosc, 12 per cent; and Bartlett, 7 per cent. The latter is gaining favor. The spacing of the winter pears, D'Anjou and Bosc, is about the same as for apples. Bartlett trees, however, are somewhat smaller and are spaced 18 to 24 feet apart. Yield per acre is about the same; 460 boxes. About 1.1 million boxes of winter pears are shipped from the valley annually and approximately 18,000 tons of Bartletts are canned.

Cherry plantings have declined from a high of 700 acres in 1940 to about 500 acres. Further decreases are expected because of frequent loss from rains at harvest time and the heavy cost of spraying to control the cherry fruit fly. The annual crop is about 1,200 tons with sweet varieties dominating. There are 160 acres in peaches. This fruit has never been an important crop and it is doubtful that acreage will increase significantly. Strawberries were an early commercial crop. Planting almost disappeared during the late 1930's due to a combination of low prices and attacks of the Cyclamen mite. New varieties, Northwests and Marshalls, and expanded markets have revived some interests. Today there are about 200 acres, an important share of which are interplanted between the rows of young fruit trees. Limited labor supply for harvest is a problem in the way of expansion.

Dairying is the only other phase of agriculture worthy of note in the Hood River Valley. The 1954 Census of Agriculture reported that 427 farm operators kept 1,585 cows and sold milk and cream

with a total value of $290,000. Only 75 operators, however, derived 50 per cent or more of their income from the sale of dairy products.

An Apple Growers' Association is the principal marketing agency. This cooperative with about 350 active members handles approximately 65 per cent of the total production of apples and pears. It has six plants with packing and cold storage facilities scattered thru the fruit districts. The Association ships 2,500 to 3,000 box cars of fresh fruit per year. Approximately one-third is destined for California markets, one-third for the eastern states, and one-third is exported, mainly to Sweden, the United Kingdom, and South American countries.

Five other concerns have plants in the valley which provide market outlets for fruit. A Dairy Cooperative serves as the marketing agency for most of the surplus milk, shipping it to Portland, 60 miles to the west.

The city of Hood River (population 4,100) is the trade, transportation, and principal fruit handling and processing center with eight plants. Located on the Columbia River at the entrance to the Hood River Valley, practically all commerce is funnelled thru it.

Other Activities

The forests which occupy 85 per cent of Hood River County provide the base for the employment for about ten per cent of the working population in the valley. Fifteen logging crews employ 125 men and four mills have crews totalling 430 men. The mills saw lumber and one has a hardboard plant operated on the basis of the sawmill slabs.

Recreation and tourist expenditures are beginning to bring income to the valley. Snow-capped Mount Hood, rivers and lakes, forested mountains, and orchard landscapes are the attractions. The Mount Hood Loop Highway provides a scenic route thru the valley that is becoming increasingly popular. During the summer months the Hood River Chamber of Commerce, with its motto, "An hour to see, a lifetime to remember," conducts guided tours. Eight to ten parties take these tours each day during the tourist season.

Forecast

Fruit which has given the Hood River Valley a renown out of proportion to size or value will continue to be the backbone of its agriculture. Limited potential fruitland, however, will restrict any sizeable expansion. Small acreages of idle land presently found on

many fruit farms may become the basis for livestock sidelines. The productivity of these for pasture and hay could be improved with irrigation. There are also possibilities for increasing the carrying capacity of unimproved pastures by seeding improved grasses and utilizing commercial fertilizers.

Wood products industries and "sale" of recreation attractions will continue to provide the main elements of diversification in the valley's economy. Only minor growth can be expected in the former, because ease of moving logs down the Columbia River gives mills downstream a competitive position. In common with the entire Pacific Northwest, the valley does have considerable potential for expansion of its tourist industry.

MAPPING EXPERIENCES IN THE EARLY GRADES[1]

ROSE SABAROFF
Oregon State College

In a previous article potential firsthand experiences with pupils in the primary grades were presented—the geographic *intake* that could be gained thru explorations of the immediate environment. This article is concerned with provision for the *outgo,* equally important, which is made within the classroom after the trips.

DISCUSSION AND DRAMATIC PLAY HELP CLARIFY CONCEPTS

When the children have made their observations and discoveries, they must use these raw materials to build geographic concepts which will become the basis for their map-making and map interpretation. The teacher and the children will raise questions about what they saw and try to understand relationships. The teacher's role in guiding discussion is especially important. She will be guiding questions in a direction that will lead toward geographical thinking.

The earlier questions will have to do with "What" and "How." "What did we see at the bakery? How did the bakery smell? How did the man fill the underground gas tank? What is happening to

[1] This is the second in a series of articles. The previous article appeared in the September, 1958 issue.

the trees and crops now that the sun is higher in the sky at noon and it is warmer? How did it feel to climb that long slope even tho it did not seem very high?"

"Where" questions are very important in preparation for mapping. Teacher and class will want to decide things like: In what direction did we walk from school? Where did we make the first turn in the road? Where was the play area in the park? Where did we cross the streetcar or railroad tracks? Such a series of "where" questions are concerned with *relative* direction—where, in terms of the school or other familiar landmarks, not cardinal directions.

Words are not the only way of rethinking a trip. Young children can learn much thru active use of their bodies and senses. Their play is a way of learning and can be developed constructively. They may use blocks or other adaptive materials and reenact their excursion with a guiding hand or question from the teacher where necessary to clarify relationships. Many of the previous questions lend themselves to use in a dramatic play situation.

MAPPING CAN BE THREE-DIMENSIONAL

Dramatic play in which props are used as symbols is one form of three-dimensional mapping. Reconstructing with blocks is another form. Whittemore has found that children will begin early and without direction to represent places they have seen by reproducing them with blocks.[2] Mitchell says, "The best of all adaptable materials seems to be blocks which are cut in multiples of a given unit."[3] Mitchell[4] describes a block map made and interpreted after several neighborhood trips had been taken. The reconstruction started with the school, and someone laid out a street with blocks. The teacher asked key questions, and the children answered with words and a block to represent it.

Teacher:*	Children:*
Where do we come when we go in this direction?	Market.
What did we pass?	Hydrant.

[2] Katheryne T. Whittemore, "Maps," *Geographic Approaches to Social Education*, Nineteenth Yearbook, National Council for the Social Studies, Washington, 1948, 120.

[3] Lucy Sprague Mitchell, *Young Geographers*, John Day Co., New York, 1934, 27.

[4] ———, "Geography with Five-Year-Olds," *Progressive Education*, 6 (November, 1929, 237.

Then what did we come to?	Another street. (This street was on a diagonal. The children put it in at right angles. The teacher shifted the block to correct it without saying anything).
What else did we come to?	Show. Subway. (Child lifted the street block at that point and put another one under it.)
And what was beyond?	Docks, boats, water. The River. The Hudson.
Beyond in each direction?	Water. East River.
And what is it when there is water all around?	An island. (And the children put play boats all around).

(*Condensed from material in Mitchell's *Young Geographers*)

This block play was done with a five year old group. It shows very clearly how map thinking develops with firsthand experience, three-dimensional map-making and *guidance*. Older children might prefer to draw a large scale pictorial representation on large sheets of paper scotch-taped together and placed on the floor in proper orientation. Seven-year-olds enjoy and learn with more permanent constructions:

"The media through which children find their most fluent, most satisfactory expression, change as they mature. Blocks disappear about seven when the children wish a more permanent medium in order to carry on longer-span, more consecutive play or thinking. This wish often gives a great impulse to carpentry work and crude "cities" or "town" or "villages" with bench-made buildings, etc., appear in place of the block constructions. Painting and clay modelling, often in relation to houses, stores, stations, etc., are elaborated, and dramatic play, often with few words, develops."[8]

Three-dimensional reproduction can be most helpful in producing understandings of some difficult concepts; for example, an understanding of how a bridge spans a body of water or what an island really looks like. Children might set up chairs, put a board across them to span an oilcloth water body, then drive their toy cars across. Many farm problems of flooding and irrigation may also be analyzed. Children make model maps in a large box or sand table. If plaster of Paris or some such material is used, the children can make low areas, flood them and discover how a lake is formed or produce a lake with an island in it. If the model is large enough,

[8] Mitchell, *op. cit.*, 32.

the children can float tiny boats around it, or bring clay animals to drink at the water's edge. Children can also make small models with putty in a cake pan.

Drainage is also a difficult concept, equally important in rural or urban settings. Children can readily go outdoors and see rain running downhill after a rain. They can build a mound of dirt and see water drain off. And still the concept of drainage is far from complete. Older children and adults often do not thoroly understand upstream and downstream or drainage. One additional tangible method of studying this concept is in a large sand table. Barton describes an experiment to be carried on in a sandbox.

". . . take a large, thick piece of glass and slope it lengthwise in a sandtable. The glass may be painted blue on one side or . . . a light blue desk blotter under the glass. The entire glass is then covered with sand . . . trace a depression in the sand to represent a valley. The exposed glass will represent the water. Tributary valleys may be traced.

. . . can carry this project still further by placing bridges across the rivers and a house or two on a hill. If greater detail is desired, small twigs may be added for trees and a lake placed at the head of a stream. At one end, the glass may be uncovered to represent part of an ocean. The river may be shown as flowing into the ocean. Other items representative of the local environment may be added."[6]

Sandboxes may also be used to actively show drainage.[7] Very slowly pour water and have it run off. Having the whole bottom on a slope as described above probably gives a deeper understanding of the total drainage pattern in the local area (slope the bottom as the local neighborhood is sloped, than when children or teacher just model obvious hills and have the water run off. Small models can also be made by individual children in planting flats. They might reproduce some area seen on a trip or from a picture. Fill the box with soil and put in appropriate miniature shrubs, trees, hills, rocks for bare mountains, exposed painted glass for water, etc. Sand from the beach should be used for sandy areas; appropriate soil should be used for the type of natural vegetation, cultivated crops, forest areas, or fields with animals that are to be represented. These models should be authentic as far as possible or else they can produce misconceptions.

Tangible mapping experiences in themselves do not guarantee

[6] Thomas F. Barton, "Geographic Instruction in the Primary Grades," *Geographic Approaches to Social Education*, Nineteenth Yearbook, National Council for the Social Studies, Washington, 1948, 214.

[7] ————, "Why Not Use a Sandtable?" *Journal of Geography*, 53 (February, 1954), 64.

understandings. Discussion and discovering of relationships requires planning and guidance on the part of the teacher. The children must also be helped to make the transition from the tangible to the abstract. Mitchell describes a common error, made in this case by a bright twelve-year-old:

"He knew that water flowed down hill—who does not at twelve? Yet he never related that fact to the rivers he drew so elaborately on his copied maps; for he thought that rivers flowed in from the oceans. That is probably a misstatement. No bright twelve-year-old could *think* that. More accurately, he did not think when he came to rivers. . . . His kind of non-thinking is not uncommon in geographic relations."[8]

The teacher must be ever watchful that misconceptions are not developed. Constant check must be made with reality even when tangible symbols are used. They are still symbols altho adults ofter forget this.

Pictorial Mapping Experiences

Children also like to work with crayons, paints, scissors, and paste. They will portray on individual drawings or murals what they have seen on a trip. They do not worry too much about perspective and scale. What can be portrayed is relative location and relative distance. Such map pictures are not only a means of rethinking relations and reorganizing data, but they also provide a good opportunity for the teacher to check error in perception. Mitchell describes such an incident with eight-year-old children and an island.

"I asked the whole group to draw an island as a fish would see it. They knew that islands did not float . . . but they had never related the island formation to hills and valleys. And so they anchored their islands!"[9]

Preston[10] studied a third grade class and found children often lack experiences for interpreting three-dimensional landscape from a map—that they need to develop a bird's-eye-view. He suggests that they practice drawing a book that is lying upon the floor or make an informal sketch as they look down on something. Preston also suggests that they construct floor plans and make diagrams or models of how they walk to school. Children might also look at familiar objects from heights to see what happens to size and third dimension. They might also estimate size from height and then check when they come down.

Whittemore recommends pictorial representation for primary

[8] Mitchell, *op. cit.*, 1934, 42-43.

[9] Mitchell, *ibid.*, 43.

[10] Ralph C. Preston, "Implications of Children's Concepts of Time and Space," *Social Studies*, 36 (May, 1945), 217.

grade children as the next step from third dimensional to more abstract interpretation. Streets and roads, ground plans, buildings, lamp posts, trees, are realistically drawn. No abstract smybols are used. This provides the beginning of feeling for relative size, relative location and relative distance. "The child must have the concept that is expressed by a map symbol or the symbol will be meaningless."[11]

With the streets or roads of the neighborhood forming the ground plan, and symbols moving gradually from the realistic toward the more abstract; this is the kind of mapping second graders will be doing following experiences in which they have seen the real landscape.

Mapping with Semi-Pictorial and Abstract Symbols

When children have had a backround of concrete and pictorial mapping and are able adequately to conceive the map as a representation of the landscape looking down upon it, they will move toward conventional symbols. A street or road can easily be represented by a double line, buildings by squares or rectangles, a school as a square flying a little triangular flag, a church as a square with a little cross extending from one side. Even a river becomes a line, following proper background experiences. Kohn points out that you must start with reality. Recognize landscape features, such as a river, out-of-doors. "Following such an experience, the commonly accepted symbol for rivers should be introduced and used in drawing and interpreting maps."[12]

When teacher and children draw a large-scale map of the neighborhood or some part of it (the marketing area, a park, a wooded area, cultivated fields) and then play on it, the ground plan is more abstract than teachers often realize. The younger the children, the larger the ground plan should be. The symbolic is only possible when children can recall the genuine image in response. A view from a height and an aerial view are necessary in-between-steps from a reality to symbolic representation.[13] Children should compare sizes of known objects with how they appear from a height. Or they might estimate the size of an object seen from a height and then check with reality when they come down. Seven-year-olds play on the floor with an outline map painted on a large sheet of paper

[11] Whittemore, *op. cit.*

[12] Clyde F. Kohn, "Interpreting Maps and Globes," *Skills in Social Studies*, Twenty-fourth Yearbook, National Council for the Social Studies, Washington, 1953, 167.

[13] Mitchell, *op. cit.*, 1934, 46.

or linoleum (6′ × 8′—larger if practicable). Much more definite work in orientation is suitable at this age.

"A certain amount of direct drill . . . in orientation is welcomed by the children. I should never recommend it for young children in and for itself; only in so far as it makes for better play. Maps must be kept functioning and for six- and seven-year-olds this usually means they must be played upon. Children like to take imaginary trips on a map, particularly if it is large enough to permit impersonations of pilots or engineers or bell buoys or hills and so extend the "drill" beyond a merely locational exercise into the realm of images, of play."[14]

Tho the map itself may becoming much more abstract, the use of it brings back the reality. Scale becomes increasingly important and the teacher should draw the map to scale. The first maps are drawn large—on playground or floor; later, smaller on paper. As the same area is reproduced in different sizes and the child recognizes the same features and realizes it is the same landscape, he is learning about scale on a map. However, base maps should be drawn to scale by the teacher and not by the children at this age.

"Children of primary age can express and compute scales only in terms of number of blocks or in the amount of time required to walk, ride, or fly from one place to another." Kohn encourages the use "nearer" and "farther" in comparing distances. At the primary level he says drawing to scale is done by the teacher, and the scale is large. He recommends 12″ to 1 mi. (1: 5280) as the scale to be used for representing the local environment.[15]

On a base map drawn by the teacher, the children can manipulate small toys as symbols, then little pictures pasted on cardboard, and eventually, add semi-pictorial and more abstract representations. At this later point they should begin to use a legend. The legend is explained as a means of making it possible to tell someone else what the symbols stand for. Children can now look at a city or county map and find some of the same symbols used there. A legend should be placed in the lower left-hand corner. Geographers agree that it is best to place the legend correctly from the start. Wherever possible use accepted practice. Also use the same symbols consistently.[16]

Barton[17] describes the use of a functional play map, summarized below:

"The children take a trip on a bus that comes to school and follows a local route. They look for landmarks, identify location. They notice turns, new streets. When they

[14] *Ibid.*, 46-47.

[15] Kohn, *op. cit.*, 152.

[16] Mamie L. Anderzhon, "Writing Your Own Map Language," *Journal of Geography*, 45 (January, 1946), 35-38.

[17] Thomas F. Parton, "Functional Play Map," *Social Education*, 19 (May, 1955), 12.

return to class, they have a discussion. They recall and relate in order the few places they saw. The teacher has drawn a base map of the main streets. Though the base map is abstract and teacher-drawn, the activity with it brings it to life. The teacher traces the route. If the map is large enough the children can run a toy bus over the route. They add toy buildings in the proper locations. The toy buildings are gradually replaced by pictures and then by symbols that are conventional. The map should be oriented properly from the start. They may now compare it to a street map of the city. It would be worthwhile to get an aerial photograph of the same area if possible."

Hoffman[18] suggests a flannel map which can be used functionally.

"The children can add symbols of rivers, mountains, etc. Colored cord or wool can show transportation routes. Such a map can be adjusted to any grade and the pertinent symbols added. Place only that which is needed to teach a specific lession."

The advantage of such a map is that the neighborhood can be painted on as a permanent base map for second grade. The children may then add symbols of just those features seen on a particular trip and then remove them again. They may be concerned at one time with a given basic human activity such as protecting, as seen thru a trip to a firehouse. They may then add symbols for firehouse, hydrants, fire alarm boxes, using agreed upon symbols. On another day they might use the same base map for other purposes. Also they might add symbols to compare two features. For example, with the teacher's guidance they might discover that gas stations appear on important street or highway intersections; that schools are usually in residential areas; that marketing areas are near routes of public transportation.

IN CONCLUSION

Children in the primary grades should be helped to make inferences by comparing different facts about the same area. The reason we encourage children to draw maps is not merely to learn to draw maps, but to organize the raw material of observation in such a form as to advance relational thinking. A flannel base map as described above is one way to do this because it lends itself to flexibility. However, relational learning can take place in any well-planned program of mapping, and at every level—three-dimensional, pictorial, semi-pictorial and abstract—but only if the teacher is aware that developing relational thinking is her objective.

A program for developing map-thinking and may interpretation thru learning to read maps made by others will be taken up in the third article of this series, to appear in a future issue.

[18] Hazel Ward Hoffman, "The Map Comes Alive," *Journal of Geography*, 55 (February, 1956), 79.

PENNSYLVANIA GEOGRAPHY CLUBS

NORAH E. ZINK
State Teachers College
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The importance of Geography in the schools of the United States at this time varies from state to state and from community to community. In some areas geography's position in both elementary and secondary schools is secure; geography is taught as a separate subject in grades 4, 5, and 6, and there are required courses in the junior and senior high schools. Other schools have in the past or are just now experimenting with fused, integrated, or correlated courses which usually offer little real work in geography. In many high schools the only geography course is an elective course. Geographers are especially eager at this time to improve the position of the field of geography. One way to increase interest in this subject is thru geography clubs.

For the last 30 or 40 years, Pennsylvania has shown a great interest in geography which has been manifested in the high esteem in which geography is held in its schools and the enthusiasm of its geography teachers. This appreciation can be increased by organizing geography clubs. At present, Pennsylvania has 30 junior geography clubs and 25 adult groups. In all there are over 1,200 junior geographers and about 500 members of college organizations and over 600 members of other adult groups of the state education association. In addition, in the fall of the year, each convention district of the Pennsylvania Education Association (the state is divided into nine of these districts) holds a two-day conference or series of meetings, some of which include the traditional institute meetings of towns, boroughs, and counties. Each convention district has a geography section which presents geography, or the field of teaching geography, or gives a demonstration in the teaching of a geography lesson.

Three conclaves of the Junior Geographers have been held: the first at State Teachers College, Lock Haven in April, 1956, the second at State Teachers College, Indiana, Pennsylvania, April, 1957. Nineteen Junior Geography Clubs were represented at the Indiana meeting and 106 junior geographers were in attendance. The college groups met and organized the College Section of the Pennsylvania Council of Geography Teachers; five college groups were represented by 56 members. In April, 1958, at the meeting of

the Pennsylvania Council for Geography Education, the third conclave of junior geographers and the second meeting of the College Section was held at Reading, Pennsylvania.

The Junior Geography Clubs are in a few grades of the elementary school, but largely in junior and senior high schools. These groups are formally organized with constitutions, officers, etc. They carry out activities which add to interest or knowledge in geography. Many clubs prepare projects which are entered in competition with other clubs. One of the clubs,[1] the Geography Club of Northwest High School, Reading, Pennsylvania, each year gives prizes for the best geographic notebooks. The Western Pennsylvania Geography Club has a very large exhibit of several hundred projects each year at the Buhl Planetarium in Pittsburgh where awards are also presented.

Each of the State Teachers Colleges in Pennsylvania except the one which does not prepare geography teachers for the secondary school, has a geography club or fraternity. Six of these groups are chapters of the national geography fraternity, Gamma Theta Epsilon. There are 10 other geography clubs in colleges (one of these is a local honorary geography fraternity, Alpha Omega Gamma) and, in addition, there are nine groups of teachers.

Several of the college clubs send delegates to meetings of the Pennsylvania Council for Geography Education held at Christmas and in the spring and to the meetings of the National Council for Geography Education. At the recent St. Louis meeting eight members of one of these groups were in attendance. They received inspiration from the papers and discussions; their interest in geography was quickened by meeting noted geographers whom they had read about or whose books they had read or used as text books and the national organization secured five new members, some of whom expect to teach geography and whom we hope will become sponsors of geography clubs, state coordinators, active members, or officers of the National Council.

Starting a Club

What is needed to start a geography club?[2] With the exception of administrative approval or a schedule of extra curricular activi-

[1] Carrie E. Babb, "A Junior Geography Club Project," *Journal of Geography*, Vol. 57 (March, 1958), p. 147.

[2] Mary Viola Phillips, *Organizing a Geography Club in a Secondary School*. Leaflet published by National Council for Geographic Education. This leaflet can be secured for 10 cents from John W. Morris, University of Oklahoma, Norman, Oklahoma.

ties which is not overloaded, little is needed except some students to work with and an enthusiastic geography teacher! Of course it would be pleasant if the students were really concerned about geography to begin with, but almost any inspired geography teacher can soon find ways to engage the attention of young people in the problems of people and their relationships to their natural environment. And what great opportunities are opened up for extending geographic knowledge and developing interest in the field! This is proven by the following summary of activities reported by the clubs which may be grouped under the following headings:

1. Gave reports on summer vacation trips, articles in magazines, talks with key people of the local community.
2. Listened to talks given by people who visited other countries.
3. Showed slides, filmstrips, movies.
4. Took field trips to points of interest to geographers.
5. Gave radio shows, put on assembly programs.
6. Sent letters to people thruout the United States and to Pen Pals, magazines to foreign universities, delegates to geography conventions.
7. Made maps, scrapbooks, current events notebooks; made an economic survey of local community.
8. Kept bulletin boards.
9. Built up a geography library; a file of free materials, pictures, maps, articles from newspapers and magazines.
10. Prepared projects for a Geography Show, held a geography exhibit, conducted a contest on geographic materials.
11. Held joint meetings with neighboring clubs; sponsored a Geography Club.
12. Maintained a weather station and posted daily weather forecasts, prepared weather charts.
13. Classified rocks for the school collection.
14. Collected receipes of foreign dishes, gave an International Tea.

With such a diversity of worthwhile geographic activities carried on by the geography clubs, geography should continue to hold an important place in the curriculum of Pennsylvania's schools and a large number of her citizens should be interested in world problems.

Have you read Professional Paper No. 19 "Changing Emphasis in Geographic Education?" Have you given a copy to your principal? Professor John Morris, Department of Geography, University of Oklahoma, Norman has copies for sale (25 cents each).

NATIONAL COUNCIL AT WORK

The Preliminary Program of the Forty-fourth Annual Meeting of the National Council for Geographic Education to be held at the Hotel Statler Hilton in New York City, November 28-29, 1958, was published in the September issue of the Journal. The program, however, did not include the names of participants serving on the Local Arrangements Committees. All of us know that the ultimate success of our New York meeting will depend upon the efforts of Committees on the local scene. The following local arrangements committee members are at work to assure the success of our November meeting:

Local Arrangements Chairman—Phillip Bacon
Teachers College-Columbia University
New York City, New York

REGISTRATION COMMITTEE

This committee consists of ten people from New Jersey and one from Connecticut as follows: Daniel Jacobson, *Chairman,* and Bertrand Boucher, State Teachers College, Montclair; Hugh Brooks, State Teachers College, Newark; Helen M. Cramer, Somerville Junior High School, Somerville; Edward W. Jones, Junior High School, New Milford; Aldonns Lapinskas and Abraham Resnick, State Teachers College, Jersey City; Constance Moy, Freeman School, Phillipsburg; Madeline E. Sharpe, Clifford J. Scott High School, East Orange; Paul Vouras, State Teachers College, Paterson; and Lester C. Oakes, Norwalk High School, Norwalk, Conn.

FIELD TRIP COMMITTEE

The Field Trip Committee consists of five persons from New York and two from New Jersey: Robert B. McNee, *Chairman,* City College of New York; John J. Dean, Hunter College; Alexander Melamid, New York University; Glenn V. Stephenson, Teachers College, Columbia University; Seymour Gray, New York City Public Schools; Daniel Jacobson, State Teachers College, Montclair; and John E. Brush, Ruthers University, New Brunswick.

PUBLICITY COMMITTEE

The seven persons on this committee are: Saul Israel, *Chairman,* Haaren High School, and Morris Gall, Yeshiva University, New York City; Clinton C. Clark, Eastern Christian Schools, and Stanford Hendrickson, State Teachers College, Paterson, N.J.; Sister John Domonic, O.P., Bronx, New York; and Pauline P. Schwartz, State Teachers College, New Haven, Conn.

AUDIO-VISUAL COMMITTEE

The three persons on the Audio-Visual Committee are: Joseph B. Hoyt, *Chairman,* New Haven Connecticut State Teachers College; New Haven, Connecticut; George Andrusin, School #1, Clifton, New Jersey; and Richard E. Harrison, Cartographer, New York City, New York.

LUNCHEON AND BANQUET COMMITTEE

The seven people on this committee are: Dorothy W. Furman, *Chairman,* Bureau of Curriculum Research, New York, New York; Phillip Bacon, *Co-chairman,* Teachers College, Columbia University; Frank S. Aimroth, Benjamin Franklin School, Westfield, New Jersey; Genevieve Blake, Junior High School Division, New York City Board of Education; Julius Kaikow, City College of New York; Reba McQuigg, Riverdale Country School, Riverdale, New York; Virginia Rowley, Adelphi College, Garden City, Long Island, New York.

HOSPITALITY COMMITTEE

The following people are on the Hospitality Committee: Phillip Bacon, *Chairman,* Teachers College, Columbia University; Dorothy W. Furman, *Co-chairman,* Bureau of Curriculum Research, New York; Ruth R. Berken; Margaret Beyer; Genevieve Blake; Florence Brumer; Muriel R. Cook; Seymour Gray; Francis R. Harmon; Mary V. Lyons; Florence V. Oths; Martha Shapp; Ada A. Towne; Roslyn L. Weissman; and Flora B. G. Zaluskin, of the New York City Public Schools; Saul Israel, Haaren High School; Julius Kaikow, City College of New York; Reba McQuigg, Riverdale Country School, Riverdale; Virginia M. Rowley, Adelphia College, Garden City, Long Island; Sister John Dominic, O.P., Bronx; and Robert J. Weiner, Briarcliff College, Briarcliff Manor, all of New York; Frank S. Almroth, Benjamin Franklin School, Westfield; George Andrusin, School #1, Clifton; Adelbert Botts, Trenton State College, Trenton; Sanford Hendrickson, State Teachers College, Paterson; Edward W. Jones, Junior High School, Clifton; Constance Moy, Freeman School, Phillipsburg; Madeline Sharpe, Clifford J. Scott High School, East Orange; and Guido G. Weigend, Rutgers University, all of New Jersey; and Lester C. Oakes, Norwalk High School, Norwalk and Pauline Schwartz, State Teachers College, New Haven, Connecticut.

REPORT OF THE NOMINATING COMMITTEE

by

JEWELL PHELPS, *Chairman*

The Nominating Committee of the National Council for Geographic Education submits the following nominations for consideration by the General Assembly, November 29, 1958. Each person nominated has been acquainted with the duties of his office and has indicated his willingness to serve, if elected.

For President: *Adelbert K. Botts,* Chairman of Department of Geography, State Teachers College, Trenton, New Jersey. B.A., State Teachers College, Valley City, North Dakota. M.A., Ph.D., Clark University. At present First Vice-President of National Council for Geographic Education

For First Vice-President: *John W. Morris,* Professor of Geography, University of Oklahoma and Associate Director, Institute of Community Development, University of Oklahoma. B.S., University of Oklahoma. M.S., Oklahoma A. and M. University. Ph.D., George Peabody College for Teachers. At present Secretary of National Council for Geographic Education

For Second Vice-President: *Lyle Fletcher,* Associate Professor of Geography, Bowling Green State University, Bowling Green, Ohio. A.B., Ohio University. M.A., Ohio State University. At present a member of the Executive Board of National Council for Geographic Education and Chairman of Committee on Revision of Topographic Maps

For Secretary: *Lorrin G. Kennamer, Jr.,* Department of Geography, University of Texas. A.B., Eastern Kentucky State College. M.S., University of Tennessee. Ph.D., George Peabody College for Teachers. At present Second Vice-President of NCGE and Associate Editor, JOURNAL OF GEOGRAPHY

For Treasurer: *John H. Garland,* Professor of Geography, University of Illinois. Ph.B., University of Chicago. M.S., Ph.D., University of Chicago. At present Treasurer, National Council for Geographic Education

Executive Board: *H. Phillip Bacon,* Associate Professor of Geography, Teachers College, Columbia University. A.B., University of Miami. M.A., Ed.D., George Peabody College for Teachers. *George T. Renner, 3rd,* Chairman Department of Geography, Arizona State College, Tempe. A.B., Stanford, M.A., Ed.D., Columbia University. Robert N. Saveland, Editor, Ginn and Company, Boston. A.B., Washington University. M.A., Ed.D., Columbia University

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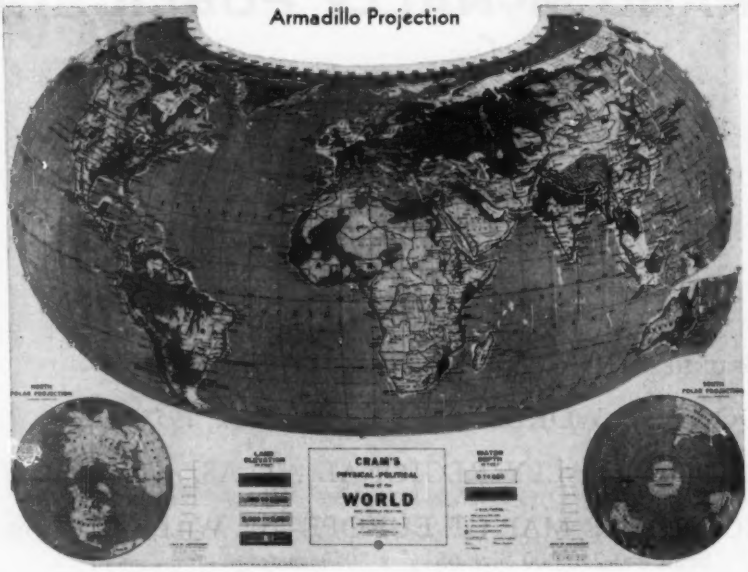

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Marion Clawson and Burnell Held. **The Federal Lands: their use and management.** Published for Resources for the Future by the Johns Hopkins Press, Baltimore, 1957. 561 pages (including 84 of appendices) with photographs, tables, graphs, and index. $8.50.

Those familiar with an earlier work of Clawson's (*Uncle Sam's Acres*, Dodd, Mead & Co., 1951) will recognize the theme and format of *The Federal Lands*. Again the concern is with the role and organization of the vast real estate holdings of the Federal government in the satisfaction of our material and aesthetic needs. The principal resource management agencies are discussed in terms of development, responsibilities, and operation within the framework of policies and procedures established by legislative enactments.

Two fundamental theses underlie this study; one, the Federal government is in the resource management field to stay with no foreseeable diminution of effort or realm; and, two, profit-taking should be as rewarding as possible "to the extent that it does not conflict with other more important objectives." The acceptance of the first as a near absolute tends to dull parts of the study, such as in the final chapter "What of the future?"; recognition of possible alternatives is in order. While few readers would likely accept the second thesis as a primary goal of Federal landownership, its consideration by the authors is the highlight of the book. The chapters dealing with the financial aspects contribute valuable materials and provocative ideas; indeed, to this reviewer they represent the merit of the undertaking. The extensive treatment of topics appearing in Clawson's earlier work and in other well-known studies will attract only the initiates to this phase of Federal activity.

An unusual Appendix accompanies this study. Its exceptional length contains a wealth of statistical support for the authors' conclusions.

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GEOGRAPHICAL MATERIALS RECEIVED

Wesley and Wronski. **Teaching Social Studies in High Schools.** Fourth Edition. D. C. Heath and Company, 285 Columbus Ave., Boston 16, Massachusetts. 1958. 628 pages with table of contents, appendix, and index. $6.00.

Oliver Stewart. **Danger in the Air.** Philosophical Library, Inc., 15 East 40th St., New York 16, New York. 1958. 194 pages with index, table of contents, and illustrations. $6.00.

Francis S. Chase and Harold A. Anderson. **The High School in a New Era.** The University of Chicago Press, 5750 Ellis Ave., Chicago 37, Illinois. 1958. 465 pages with table of contents and index. $5.75.

Pounds and Cooper. **Workbook to World Geography.** Fifth Edition. South Western Publishing Company, Chicago 5, Illinois. 1957. 144 pages with maps and illustrations. $1.00.

Mary Foley Horkheimer and John W. Diffor. **Educators Guide to Free Slidefilms.** Educators Progress Service, Randolph, Wisconsin. Tenth Edition. 1958. 206 pages with table of contents, title index, subject index, and source index. $6.00.

James Preu. **The Negro in American Society.** Florida Grower Press, Tampa, Florida. 1958. 89 pages with table of contents. $3.52.

R. N. C. Bowen. **The Exploration of Time.** Philosophical Library, Inc. 15 East Fortieth St., New York, New York. 1958. 143 pages with index and illustrations. $6.00.

Harry L. Hunker. **Industrial Evolution of Columbus, Ohio.** Bureau of Business Research, College of Commerce and Administration, Ohio State University, Columbus, Ohio. 1958. 260 pages with table of contents, appendices, table, and bibliography. $4.00.

Patricia H. Suttles. **Elementary Teachers Guide to Free Curriculum Materials.** Educators Progress Service, Randolph, Wisconsin. 1958. Fifteenth Edition. xv and 318 pages with title index, subject index, and source index. $6.50.

Harold Fullard and H. C. Darby. **The University Atlas.** Denoyer-Geppert Company, 5235-59 Ravenswood Ave., Chicago 40, Illinois. 1958. Eighth Edition. xxiv and 176 pages with 88 pages of index, and table of Contents. $7.50.

Hugh Odishaw. **Science Explores Our World.** American Education Publications, Education Center, Columbus 16, Ohio. 1958. 47 pages with table of contents. 15 cents.

Max L. Moorhead. **New Mexico's Royal Road: Trade and Travel on the Chihuahua Trail.** University of Oklahoma Press, Norman, Oklahoma. 1958. xi and 234 pages with index, bibliography and contents. $4.00.

Charles Robequain, translated by E. D. Laborde. **Malaya, Indonesia, Borneo and the Philippines.** Longmans, Green and Co., Inc., 55 Fifth Ave., New York 3, New York. 1958. xi and 466 pages with index and bibliography. $8.00.

L. Dudley Stamp. **A Regional Geography, Part I: The Americas.** Longmans, Green and Co., Inc., 55 Fifth Ave., New York 3. 1958, 8th Edition. viii and 269 pages with index. $4.00.

Delia Goetz. **At Home Around the World.** Ginn and Company, Statler Bulding, Boston 17, Massachusetts. 1958. vi and 307 pages with index and contents. $3.96.

Robert M. Glendinning. **Eurasia.** Ginn and Company, Statler Building, Boston 17, Massachusetts. 1958. ix and 437 pages with IV Tables, index, and contents. $4.96.

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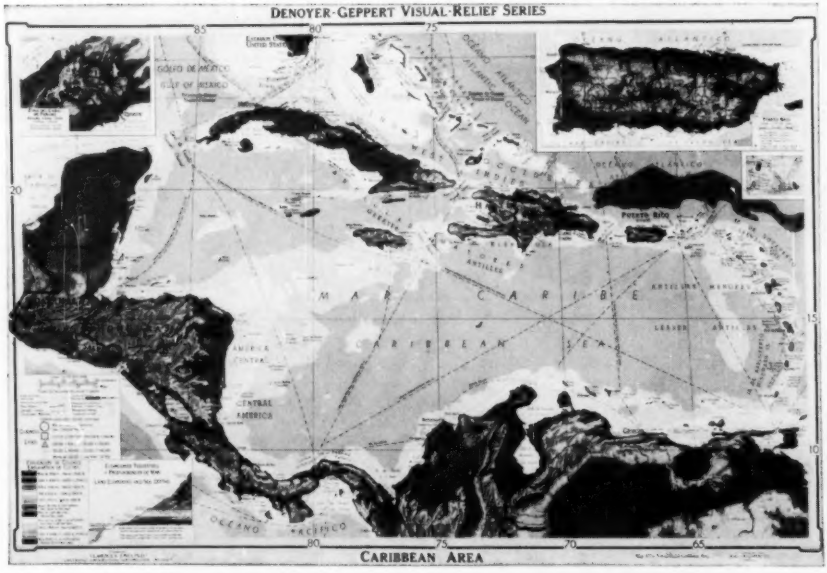

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